

Mineral Industry Surveys

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VANADIUM IN OCTOBER 1999

According to Metal Bulletin, U.S. ferrovanadium prices during October ranged from \$4.70 to \$5.10 per pound of vanadium content, compared with \$4.90 to \$5.20 in September. The range for European ferrovanadium prices was \$8.80 to \$9.80 per kilogram in October. In September, European ferrovanadium prices ranged from \$9.50 to \$10.40. For vanadium pentoxide, the October range as published by Metal Bulletin was \$1.50 to \$1.73 per pound, while in September it was \$1.70 to \$1.98 per pound.

Officials at Strategic Metals Corp. (Stratcor) and its partner Bitor-Europe, citing an oversupplied market, announced plans to

temporarily close their plant in Harwich, England. The plant reportedly recovers about 1,000 tons of vanadium pentoxide from Orimulsion ash, and is expected to resume operation in early 2000 (Ryan's Notes, 1999).

Reference Cited

Ryan's Notes, 1999, Orbit Metallurgical has temporarily shut: Ryan's Notes, v. 5, no. 41, October 11, p. 3.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM 1/

(Kilograms, contained vanadium)

	1998		1999			
	Consumption	Stocks	September		October	
			Consumption	Stocks r/	Consumption	Stocks
Ferrovandium 2/	4,010,000	302,000	278,000 r/	301,000	279,000	301,000
Vanadium-aluminum alloy	W	9,000	W	12,900	W	12,900
Other 3/	387,000	3,000	37,900 r/	9,700	38,100	9,700
Total	4,390,000	314,000	316,000 r/	323,000	317,000	323,000

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

3/ Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol "W."

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE 1/

(Kilograms, contained vanadium)

	1998	1999		
		September	October	Year to date
Steel:				
Carbon	1,650,000	93,300 r/	91,400	962,000
High-strength low-alloy	950,000	74,200 r/	82,300	797,000
Stainless and heat-resisting	42,400	12,100	6,670	67,400
Full alloy	891,000	64,400 r/	70,800	729,000
Tool	269,000	31,100	33,400	288,000
Total steel	3,800,000	275,000 r/	285,000	2,840,000
Superalloys	19,900	1,370 r/	1,370	13,000
Miscellaneous and unspecified 2/	571,000	39,500	31,200	374,000
Total consumption	4,390,000	316,000 r/	317,000	3,230,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3
U. S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY AND
VANADIUM METAL, INCLUDING WASTE AND SCRAP 1/

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	298,000	\$496,000	12,200	\$491,000
1999:				
July	--	--	470	25,400
August	--	--	1,630	97,400
September:				
Germany	--	--	512	42,500
Philippines	--	--	25	16,000
Russia	--	--	600	28,500
Total	--	--	1,140	87,000
Year to date p/ 2/	1,550,000	1,610,000	17,300	658,000
Exports:				
1998	856,000	11,500,000	346,000	7,160,000
1999:				
July	61,400	1,150,000	17,500	310,000
August:	18,000	235,000	13,800	268,000
September:				
Canada	67,400	348,000	--	--
Japan	1,670	33,500	--	--
Mexico	10,500	137,000	--	--
United Kingdom	113	3,330	--	--
Total	79,700	522,000	--	--
Year to date	335,000	4,230,000	128,000	2,440,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions to previous months' data.

Source: Bureau of the Census.

TABLE 4
U. S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND
OTHER OXIDES AND HYDROXIDES OF VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	1,620,000	\$39,300,000	847,000	\$12,300,000	33,000	\$574,000
1999:						
July	124,000	1,280,000	46,800	412,000	--	--
August	239,000	2,490,000	37,400	275,000	--	--
September:						
Austria	30,400	317,000	--	--	--	--
Canada	37,700	267,000	--	--	--	--
China	26,100	256,000	--	--	--	--
Korea, Republic of	7,990	85,900	--	--	--	--
South Africa	106,000	1,080,000	30,700	273,000	--	--
Total	208,000	2,000,000	30,700	273,000	--	--
Year to date	1,360,000	15,500,000	145,000	1,380,000	--	--
Exports:						
1998	579,000	13,700,000	681,000	6,850,000	232,000	2,830,000
1999:						
July	20,700	284,000	17,800	93,000	6,910	70,000
August	16,800	276,000	10,500	58,600	--	--

See footnotes at end of table.

TABLE 4--Continued
U. S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND
OTHER OXIDES AND HYDROXIDES OF VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Exports--Continued:						
1999--Continued:						
September:						
Belgium	--	--	32,000	\$160,000	--	--
Canada	14,200	\$181,000	--	--	6,090	\$26,000
Italy	--	--	33,200	167,000	--	--
Mexico	11,800	156,000	--	--	--	--
Venezuela	--	--	632	6,000	--	--
Total	26,000	337,000	65,800	333,000	6,090	26,000
Year to date p/ 3/	208,000	3,040,000	679,000	3,880,000	62,100	559,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include catalysts containing vanadium pentoxide.

3/ May include revisions to previous months' data.

Source: Bureau of the Census.

TABLE 5
U. S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG 1/

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	3,030,000	\$9,960,000	2,280,000	\$1,710,000	1,250,000	\$10,500,000
1999:						
July	104,000	518,000	129,000	103,000	--	--
August	21,100	128,000	116,000	72,700	286,000	395,000
September:						
Canada	48,200	33,500	280,000	141,000	--	--
Italy	107,000	71,100	--	--	--	--
Mexico	106,000	813,000	--	--	--	--
Total	261,000	918,000	280,000	141,000	--	--
Year to date	1,660,000	6,860,000	1,640,000	891,000	855,000	1,360,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 6
U. S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS 1/

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	350	\$19,300	129,000	\$1,410,000
1999:				
July	--	--	2,920	43,200
August	--	--	26,900	276,000
September:				
Germany	--	--	416	15,600
Year to date p/ 2/	8	14,300	88,200	1,010,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions to previous month's data.

Source: Bureau of the Census.